

## **REMARKS**

With the cancellation of claims 1, 4-7, 14-16 and 40-42 and the addition of claims 43-49 via the instant amendment, claims 9, 10, 19-21, 30, 31, 33, 35-39 and 43-49 will be pending upon the entry of the instant amendment.

Support for inserting “and obtaining the polyester” into the claims can be found explicitly in Examples 1-7 and implicitly in page 12; lines 9-10, of the specification.

The amendments to claims 9 and 30 find support in the specification in the paragraph bridging pages 6 and 7; the second full paragraph of page 7; page 8; and page 11, first full paragraph, as well as the original claims 1 and 4 in page 24.

The amendments to claim 10 find support in the specification the second and third full paragraphs in page 12, and the paragraph bridging pages 12 and 13.

The amendments to claims 19 and 31 find support in the specification in the paragraph bridging pages 9 and 10.

The amendments to claims 20, 21, 33, 35 and 36 find support in the specification in page 6, lines 2-6 and page 11, lines 4-9.

The conversion of claims 10, 21, 37, 38 and 39 from being directed to a polymerization catalyst for producing polyester to a process for producing polyester is inherently supported by the disclosure throughout the specification of the invention as comprising the polymerization catalysts and processes for using the polymerization catalysts.

Support for new claims 43 and 44 can be found in the specification in the paragraph bridging pages 6 and 7.

Support for new claims 45-49 can be found in the specification at page 13, lines 12-14.

Claims 9, 19, 20, 30, 31, 33, 35 and 36 are amended by inserting recitations from their respective catalyst base claims. Applicants submit that the amendments do not narrow the scope of the claims.

The amendments to claims 10 and 21, 37-39 merely convert the catalyst claims into process claims without narrowing the amended claim recitations.

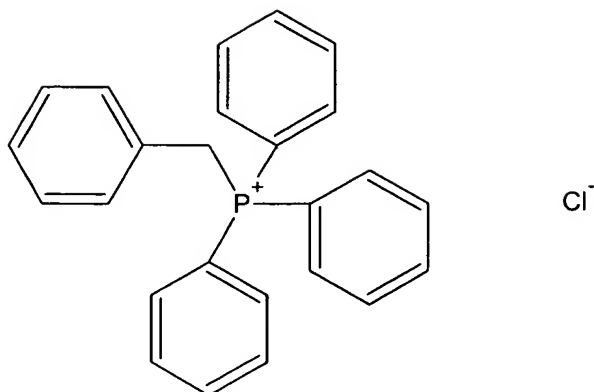
The replacement of "coexistent therewith" with "used in combination with" in the claims is editorial and would not narrow the scope of the amended claim recitation.

#### Claim Rejections Involving Elmore

Applicants respectfully traverse the anticipatory rejections of the claims over Elmore (US 4,972,036).

Elmore discloses a catalyst for catalyzing an esterification reaction between citric acid and vicinal epoxides which contain only one epoxide group to produce citric esters (column 3, lines 29-32 and 39-44; column 4, lines 33-34; column 5, lines 8-18). The preferred esterification catalyst is a carboxylic acid-epoxy catalyst made from equal parts of a quarternary salt, e.g., benzyltriphenylphosphonium chloride, and a metal chelate, e.g., aluminum acetylacetonate (column 5, lines 15-18).

Applicants note that the benzyltriphenylphosphonium chloride is represented with the following structural formula.



Benzyltriphenylphosphonium Chloride

Applicants also note that Elmore fails to anticipate process claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 because the catalyst of Elmore is used in an esterification reaction between citric acid and vicinal epoxides to prepare citric esters. In contrast, the processes of claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 are for producing polyester.

#### Claim Rejections Involving Kelley

Applicants respectfully traverse the anticipatory rejections of the claims over Kelley (US 4,382,132).

Kelley discloses a process for preparing polyethylene via polymerization of ethylene in the presence of an initiator/accelerator/coaccelerator mixture, wherein the mixture contains (1) a polymerization initiator that can be a free radical generating initiator such as an epoxide or perester, (2) an organometallic accelerator such as aluminum acetoacetate, aluminum octoate or aluminum naphthenate, and (3) a

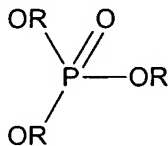
coaccelerator which can be a phosphite such as alkyl phosphite, decyl diphenyl phosphite or triphenylphosphite (column 1, lines 46-63; column 2, lines 48-57 and 63-64; column 3, line 3; column 4, lines 29 and 44-47).

Kelley fails to anticipate process claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 because the initiator/accelerator/coaccelerator mixture of Kelley is used in the preparation of polyethylene. In contrast, the processes of claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 are for producing polyester.

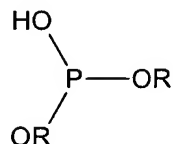
#### Claim Rejections Involving Rekers

Applicants respectfully traverse the anticipatory rejections of the claims over Rekers (US 4,192,775).

Rekers discloses an olefin polymerization catalyst prepared by depositing, on an inorganic support material having surface hydroxyl groups, aluminum acetoacetate compound, and an organophosphoryl chromium product (column 2, lines 23-27). The organophosphoryl chromium compound comprises the reaction product of chromium trioxide with an organophosphorus compound which is an organic phosphoric acid based compound or organic phosphorous acid based compound of one of the following chemical formulae,



### Phosphoric Acid Based Compound



### Phosphorous Acid Based Compound

wherein R is alkyl, aralkyl, aryl, cycloalkyl or hydrogen, but at least one R is other than hydrogen, and the organophosphorus compound is preferably a trialkyl phosphate (column 2, line 56 to column 3, line 4).

Applicants contend that Rekers fails to anticipate process claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 because the catalyst of Rekers is used in the polymerization of olefins. In contrast, the processes of claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 are for producing polyester.

#### Claim Rejections Involving Yoo

Applicants respectfully traverse the obvious rejections of the claims over Yoo (US 4,318,799).

Yoo discloses a process to improve the performance of a hydrocarbon conversion catalyst containing metal contaminants by treating the hydrocarbon

conversion catalyst simultaneously with an aluminum-containing material and at least one phosphorus-containing material in order to reduce the poisonous effects of the metal contaminants such as iron, nickel, vanadium and/or copper (column 4, lines 35-44). Examples of the aluminum-containing material include organic compounds of aluminum such as diketonates, alkoxides, carboxylates of aluminum, aluminum oxalates, aluminum acetates, aluminum diethylmalonate, and aluminum halides (column 9, line 65 to column 10, line 15). Examples of the phosphorus-containing material include  $R_3P$  (i.e., phosphines),  $(RO)_3P$  (i.e., trihydrocarbyl phosphites),  $(RO)_3PO$  (i.e., phosphoric acid compounds) and  $R_3PO$  (i.e., phosphine oxide compounds), wherein R is hydrocarbyl such as alkyl, aralkyl, alkenyl, or aralkenyl having 1 to 35 carbon atoms (column 10, lines 22-29).

Applicants contend that Yoo fails to render obvious process claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 because the process of Yoo is for the catalytic conversion of hydrocarbons, which differ from the processes of claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 for producing polyester. There would have been no suggestion or motivation to modify the process of Yoo by using the treated catalytic conversion catalyst in a process to produce polyester.

#### Claim Rejections Involving Cao

Applicants respectfully traverse the obviousness rejections of the claims over Cao (US 6,080,303).

Cao discloses a process for improving the catalytic activity of small and medium pore acidic zeolite catalyst by treating the zeolite with a phosphorus compound to form

a phosphorous treated zeolite, and then combining the phosphorus-treated zeolite with  $\text{AlPO}_4$  (column 2, lines 6-13). Examples of the phosphorus containing compound are phosphoric acid, an acidic salt of phosphoric acid such as ammonium mono or dihydrogen phosphate, organic phosphites and organic phosphines (column 2, lines 16-21). Preferably, the phosphorus containing compound is ammonium acid phosphate (column 2, line 21; column 3, lines 42-43; column 4, line 56). Cao does not specifically disclose using an aromatic phosphorus compound. The Interview Summary indicates that; when Cao is combined with an unnamed secondary reference on common materials such as triphenylphosphine or triphenyl phosphite, one could thereby arrive at the subject matter of the claims pending during the interview. Applicants respectfully disagree.

Applicants contend that Cao fails to render obvious process claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 because the process of Cao is for the catalytic cracking of hydrocarbons, not for producing polyester, and there is no suggestion or motivation to modify the process of Cao by using the phosphorus/aluminum treated zeolite in a process for producing polyester via polycondensation, esterification or transesterification.

At least because of the above reasons, withdrawal of the rejections of claims 9, 10, 19, 20, 21, 30, 31, 33 and 35-39 is requested.

## CONCLUSION

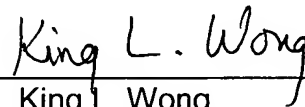
In view of the above reasoning, applicants submit that the application is in a condition for allowance. In the event that the filing of this paper is deemed not timely,

applicants petition for an appropriate extension of time. The Commissioner is authorized to charge the petition fee and any fees that may be required in relation to the filing of this paper to Deposit Account No. 11-0600.

Respectfully submitted,  
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